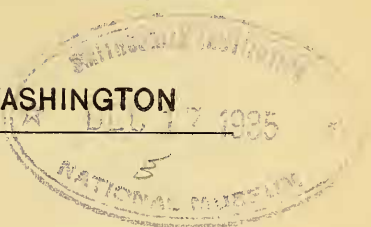


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

SEVEN NEW BIRDS FROM SALVADOR.<sup>1</sup>

BY DONALD R. DICKEY AND A. J. VAN ROSSEM.

Further work with the material collected in Salvador during 1925 and 1926 indicates the need of recognizing certain additional geographic races, which appear not to have been described heretofore. Seven of these forms may be known as follows:

**Balanosphyra formicivora lineata**, subsp. nov.

SALVADOR ACORN WOODPECKER.

*Type*.—Male adult; No. 16,281, Collection of Donald R. Dickey; Mt. Cacaguatique, Department San Miguel, El Salvador, C. A.; altitude 3,800 feet; "oak-pine association"; November 24, 1925; collected by A. J. van Rossem; original No. 9,355.

*Subspecific characters*.—Resembles *Balanosphyra formicivora formicivora* (Swainson) of Mexico in the greenish sheen of upper parts, pale yellowish white throat, and extensive white area on the proximal portion of the remiges, but differs in having the entire pectoral region narrowly striped with black and white.

The bluish sheen of the upper parts, the darker yellow throat patch, and the reduced white area on the primaries of *Balanosphyra formicivora striatipectus* (Ridgway) of Panama, Costa Rica, and the Atlantic slope of Nicaragua and Honduras, obviate the necessity of close comparison with that form. In fact, it is only in the completely streaked chest that *lineata* can be at all compared to *striatipectus*. Even in this character, however, there is a marked difference, for the black and white lines in *lineata* are of about equal width, while in *striatipectus* the central black area of the individual feathers is usually very broad and lanceolate or sagittate in shape.

*Range*.—Oak-pine association on Mt. Cacaguatique, Department San Miguel, Salvador, at altitudes ranging from 3,000 to 4,000 feet.

*Remarks*.—This species was found in Salvador only along the western slope of the Cordillera, and was not noted on the isolated volcanic mountains toward the coast. The absence of oaks would perhaps explain why none were found on Volcan Conchagua. However, acorn woodpeckers

<sup>1</sup>Contribution from the California Institute of Technology.

were also entirely absent from Volcan San Miguel and Volcan San Salvador, on both of which oaks are plentiful. No evidence of the acorn-storing habit, which is so characteristic of the species further north, was observed in Salvador. It may be of interest to note here that the color of the iris in Salvador birds undergoes marked change with age. It is ivory, or pure cream white in fully adult birds, and pale grayish blue in juveniles. This bluish cast is retained in some degree even after the birds are in complete post-juvinal plumage, and therefore constitutes a valuable field character for judging immaturity.

*Specimens examined.*—*Balanosphyra formicivora formicivora*: Mexico: Hidalgo, 1; Mexico, D. F., 1; Morelos, 1; Zacatecas, 1; Guerrero, 1; Puebla, 1. *Balanosphyra formicivora striatipectus*: Costa Rica: Cartago (Monte Redondo, 1; Volcan Irazu, 4). *Balanosphyra formicivora lineata*: Salvador: San Miguel (Mt. Cacaguatique, 20).

Large series of *Balanosphyra formicivora aculeata* (Mearns), *Balanosphyra formicivora angustifrons* (Baird), and *Balanosphyra formicivora bairdi* (Ridgway) have also been examined. Close comparison with these forms is not necessary. We have not seen *Balanosphyra formicivora albeola* (Todd), but the characters ascribed to that form would seem to make direct comparison unnecessary.

**Mitrephanes phaeocercus quercinus**, subsp. nov.

SALVADOR DUSKY-TAILED FLYCATCHER.

*Type.*—Male adult; No. 16,384, Collection of Donald R. Dickey; Mt. Cacaguatique, Department San Miguel, El Salvador, C. A.; altitude 3,500 feet; "oak-pine association"; November 30, 1925; collected by A. J. van Rossem; original No. 9,459.

*Subspecific characters.*—The darkest and most richly colored race of *Mitrephanes phaeocercus*. Similar in size to *Mitrephanes phaeocercus phaeocercus* (Sclater) of southern Mexico, but dorsally darker and greener; pileum comparatively even darker, and in more decided contrast to rest of upper parts; under parts darker and more tawny (less ochraceous), particularly on posterior under parts and under tail coverts; edgings of wing coverts and secondaries darker brown (less buffy), and webs of remiges and rectrices dusky blackish instead of dark grayish brown.

Similar to *Mitrephanes phaeocercus nicaraguae* Miller & Griscom, but larger and darker, particularly on the abdominal region. In our opinion, size alone seems sufficient to validate *nicaraguae* as a race.

*Range.*—The Sonoran oak-pine association on Mt. Cacaguatique, Department San Miguel, Salvador, north probably to adjacent parts of Guatemala.

*Remarks.*—In view of Mr. Ridgway's remarks (Birds of North and Middle America, pt. 4, 1907, p. 499, footnote) it is evident that some Guatemalan examples of this species resemble *quercinus* more or less closely. Miller and Griscom, in their description of *nicaraguae* (American Museum Novitates, No. 159, Feb. 16, 1925, p. 4), make no mention of differences between Guatemalan and Mexican specimens. However, the material examined in these two instances may well have come from entirely different sections of Guatemala. Like *Balanosphyra formicivora*, this

species was not found on Volcan San Miguel nor on Volcan Conchagua, and is therefore probably confined to the Cordillera and its spurs.

*Specimens examined.*—*Mitrephanes phaeocercus phaeocercus*: Mexico: Vera Cruz, 1; Morelos, 2; Durango, 1 (not typical); Guerrero, 2 (not typical). *Mitrephanes phaeocercus nicaraguae*: Nicaragua: Segovia (San Rafael del Norte, 2; Ocotal, 1). *Mitrephanes phaeocercus quercinus*: Salvador: San Miguel (Mt. Cacagatique, altitude 3,000 to 4,000 feet, 7).

***Thryophilus pleurostictus lateralis*, subsp. nov.**

SALVADOR BANDED WREN.

*Type.*—Male adult (“breeding condition”); No. 15,302, Collection of Donald R. Dickey; Lake Olomega, Department San Miguel, El Salvador, C. A.; altitude 200 feet; “dense forest undergrowth”; July 31, 1925; collected by A. J. van Rossem; original No. 8,369.

*Measurements of type.*—Wing 63.5; tail 51.0; exposed culmen 15.7; tarsus 21.5; middle toe (without claw) 14.9.

*Subspecific characters.*—Similar to *Thryophilus pleurostictus ravus* Ridgway in coloration, but lateral under parts more extensively and evenly barred; general size very slightly smaller; bill decidedly smaller. Similar to *Thryophilus pleurostictus pleurostictus* (Selater), but dorsal coloration more rufescent, and size smaller.

*Range.*—Southeastern Salvador.

*Remarks.*—Although the new form is intermediate between *ravus* and *pleurostictus* in that it combines the dorsal coloration of the former with the under parts of the latter, nevertheless the size, particularly of the bill, is smaller than in either, and therefore it can not be considered as an intergrade between those forms. This wren seems to be confined in Salvador to the extreme southeastern corner of the country. It is common throughout the lowlands and on Volcan Conchagua, but is apparently absent on Volcan San Miguel, and in the northern and western highlands.

*Measurements.*—

	MALES.				
	<i>Wing.</i>	<i>Tail.</i>	<i>Exposed Culmen.</i>	<i>Tarsus.</i>	<i>Middle Toe Without Claw.</i>
<i>T. p. pleurostictus</i> (4):	63.0–67.5 (65.7)	54.0–56.5 (55.1)	16.3–16.7 (16.5)	21.5–23.0 (22.2)	14.8–15.6 (15.2)
<i>T. p. ravus</i> (5):	62.5–65.0 (63.5)	48.5–51.0 (49.5)	16.5–18.3 (17.4)	21.0–22.2 (21.5)	14.3–15.2 (14.9)
<i>T. p. lateralis</i> (9):	61.5–64.5 (62.7)	46.0–51.5 (49.2)	15.4–16.2 (15.8)	20.0–21.5 (20.9)	14.0–15.2 (14.7)
	FEMALES.				
<i>T. p. pleurostictus</i> (3):	57.0–63.0 (59.8)	48.0–51.5 (49.3)	15.0–16.2 (15.7)	20.0–21.9 (20.8)	14.3–15.9 (14.9)
<i>T. p. ravus</i> (5):	59.0–63.0 (60.6)	44.5–48.0 (46.6)	15.7–17.5 (16.5)	20.2–22.2 (20.8)	13.3–15.2 (14.4)
<i>T. p. lateralis</i> (5):	53.5–57.5 (56.1)	40.5–44.5 (43.2)	14.6–15.1 (14.9)	19.5–20.3 (19.9)	13.0–14.3 (13.7)

*Specimens examined.*—*Thryophilus pleurostictus pleurostictus*: Mexico: Oaxaca (Santa Efigenia, 1); Chiapas (Mountains near Tonala, 2; San Bartolome, 2; San Benito, 1; Tuxtla, 1). *Thryophilus pleurostictus rarus*: Nicaragua: Leon (Leon, 2); Chinandega (Volcan El Viejo, 2; Chinandega, 2). Costa Rica: Guanacaste (Punta Piedra, 3; Las Cañas, 1). *Thryophilus pleurostictus lateralis*: Salvador: Morazan (Divisadero, 2); San Miguel (Lake Olomega, 9); Usulután (Puerto del Triunfo, 1); La Union (Volcan Conchagua, 4; Rio Goascoran, 13° 30' N., 1).

***Pachysylvia decurtata pallida*, subsp. nov.**

SALVADOR FOREST VIREO.

*Type.*—Male; No. 16,886, Collection of Donald R. Dickey; Puerto del Triunfo, Department Usulután, El Salvador, C. A.; altitude, sea level; "tropical forest"; January 9, 1926; collected by A. J. van Rossem; original No. 9,960.

*Subspecific characters.*—Similar to *Pachysylvia decurtata decurtata* (Bonaparte), but lighter colored throughout; pileum purer and paler gray; upper parts lighter and more yellowish green; sides, flanks, and under tail coverts lighter and more yellowish green; chin and throat conspicuously paler; chest and median under parts whiter, the greenish of sides and flanks being confined to a comparatively restricted lateral area.

*Range.*—Lowlands of southeastern Salvador.

*Remarks.*—A specimen from the town of Volcan, Canton de Oso, Puntarenas, Costa Rica, we are unable to distinguish from Mexican specimens. It seems likely that *pallida* will be found to occupy only a limited area on the Pacific coast.

*Specimens examined.*—*Pachysylvia decurtata decurtata*: Mexico: Tabasco (Frontera, 1; Teapa, 3); Chiapas (Palenque, 1); Campeche (near Yohaltun, 1). Costa Rica: Puntarenas (Volcan, Canton de Oso, 1). *Pachysylvia decurtata pallida*: Salvador: San Miguel (Lake Olomega, 6); Usulután (Puerto del Triunfo, 1, the type).

***Habia rubica salvadorensis*, subsp. nov.**

SALVADOR ANT TANAGER.

*Type.*—Male adult; No. 16,583, Collection of Donald R. Dickey; Mt. Cacaguatique, Department San Miguel, El Salvador, C. A.; altitude 3,500 feet; "subtropical undergrowth"; December 14, 1925; collected by A. J. van Rossem; original No. 9,657.

*Subspecific characters.*—Dorsally, the adult males approximate *Habia rubica confinis* (Bangs) of eastern Honduras, being darker than *Habia rubica affinis* (Nelson) of southwestern Mexico, and with less brownish suffusion than in *Habia rubica rubicoides* (Lafresnaye) of southeastern Mexico. Posterior under parts paler and less brownish than in *rubicoides*,—about intermediate between that form and *affinis*; throat and breast more rosy (less orange) red than in *rubicoides*; throat very brilliantly colored, and in more decided contrast to chest than in any other Central American



or Mexican form of *rubica* we have examined, with the possible exception of *confinis*.

Females similar to *rubicoides* dorsally, but paler and more buffy (less brownish) below; the throat, particularly, is paler and brighter, and in much more decided contrast to chest. Compared to *confinis*, coloration throughout more buffy (less greenish); flanks and upper parts darker.

*Range*.—Salvador, from sea level to at least 4,000 feet on Mt. Cacaguatique.

*Remarks*.—While *confinis* is clearly intermediate between *rubicoides* of southeastern Mexico and *Habia rubica vinacea* (Lawrence) of Costa Rica and Panama, the same thing can not be said of *salvadorensis*. The males, particularly in the posterior under parts of worn specimens, show a strong tendency, in certain characters, toward the pale rosy coloration of *affinis* from southwestern Mexico. On the other hand, the orange red tone of the throat and breast of many examples is more like *rubicoides*. The absence of the greenish tinge in the coloration of the females, which is so characteristic a feature of *vinacea*, and to a lesser degree of *confinis*, would seem to preclude the possibility of any close relationship in that direction. Unfortunately no females of *affinis* are available.

*Specimens examined*.—*Habia rubica rubicoides*: Mexico: Vera Cruz (Precordio, 7; Motzorango, 3; Papanita, 1); Tabasco (Teapa, 4); Oaxaca (Mts. near Santo Domingo, 1). *Habia rubica confinis*: Honduras: Yaruca, 6 (including the type). *Habia rubica vinacea*: Costa Rica: Puntarenas (Buenos Aires, 3; Boruca, 1); Cartago (Monte Redondo, 2); San Jose (Guañil, 1). Panama: Chiriqui (Boquete, 2; El Banco, 1). *Habia rubica affinis*: Mexico: Oaxaca (Pinotepa, 1, the type). *Habia rubica salvadorensis*: Salvador: Usulután (Puerto del Triunfo, 4); La Union (Volcan Conchagua, 2); San Miguel (Volcan San Miguel, 1; Lake Olomega, 4; Mt. Cacaguatique, 10); Morazan (Volcan Sociedad, 1).

***Habia salvini wetmorei*, subsp. nov.**

WETMORE ANT Tanager.

*Type*.—Male adult; No. 16,889, Collection of Donald R. Dickey; Puerto del Triunfo, Department Usulután, El Salvador, C. A.; altitude, sea level; "coyal palm association"; January 9, 1926; collected by A. J. van Rossem; original No. 9,963.

*Subspecific characters*.—Adult males almost exactly similar to *Habia salvini peninsularis* (Ridgway), but under parts slightly darker, particularly on flanks and under tail coverts. Females darker and richer than *peninsularis*; very close to *Habia salvini salvini* (Berlepsch), but throat more richly colored, being orange rather than lemon yellow. In one of the six females and in three of the four young males examined, in which the sex determinations were unquestionable, the orange of the throat is replaced by dull salmon pink. One additional female of this type was collected, but accidentally destroyed. Sexing was done with extreme caution in all these cases. Two phases are indicated. Close comparison with *Habia salvini littoralis* (Nelson) does not appear necessary.

*Range.*—The “coyal” palm association of the lowland districts of Salvador; occasionally straggling to higher altitudes with wandering flocks of *Habia rubica salvadorensis*, as on Volcan San Miguel at 2,500 feet.

*Remarks.*—It is indeed remarkable that while the females of the new race so closely resemble the geographically adjacent *salvini*, the males are equally close to the very distant *peninsularis*. No comparison with the chocolate-backed *Habia salvini discolor* (Ridgway) of the Atlantic slope of southern Honduras and Nicaragua has been deemed necessary.

*Specimens examined.*—*Habia salvini salvini*: Mexico: Chiapas (Guichicovi, 2); Oaxaca (Mountains near Santo Domingo, 3; Tuxtepec, 1). *Habia salvini littoralis*: Mexico: Tabasco (Frontera, 6). *Habia salvini peninsularis*: Mexico: Yucatan (Puerto Morelos, 4; La Vega, 1); Campeche Canasoyat, 1). *Habia salvini wetmorei*: Salvador: Usulután (Puerto del Triunfo, 12); San Miguel (Río San Miguel, 6; Lake Olomega, 1; Volcan San Miguel, 2); Santa Ana (Zapotitan, 1).

***Aimophila rufescens pectoralis*, subsp. nov.**

SAN MIGUEL RUSTY SPARROW.

*Type.*—Male adult; No. 17,584, Collection of Donald R. Dickey; Volcan San Miguel, Department San Miguel, El Salvador, C. A.; altitude 3,500 feet; “bunch grass—lava ravine”; March 17, 1926; collected by A. J. van Rossem; original No. 10,659.

*Measurements of type.*—Wing 79.0; tail 84.0; exposed culmen 16.5; tarsus 26.1; middle toe (without claw) 19.0.

*Subspecific characters.*—Similar to *Aimophila rufescens rufescens* (Swainson) of southern Mexico, but coloration of under parts grayer (less rusty), particularly on chest, flanks, and under tail coverts; throat and median under parts whiter (less creamy); pectoral band darker and much more pronounced. Wing and tail slightly but definitely longer.

*Range.*—Grass and lava slopes of Volcan San Miguel, Salvador, above 3,000 feet.

*Remarks.*—The new form apparently approximates *Aimophila rufescens sinaloa* Ridgway of Sinaloa in length, but has the larger bill, tarsi and feet of *rufescens*, so that aside from color differences the two need not be confused.

It is with some hesitation that we refer our birds from western and northern Salvador to *rufescens*. They are apparently identical with that form in size and in one case in coloration, but average decidedly grayer on the breast. Possibly more material might make it necessary to distinguish still another form, but for the present we prefer to treat these birds as representing the southern extension of *rufescens*, with certain slight and inconstant local differences.

*Specimens examined.*—*Aimophila rufescens rufescens*: Mexico: San Luis Potosi, 1; Vera Cruz, 2; Oaxaca, 2; Morelos, 1; Puebla, 1. Salvador: San Salvador (Volcan San Salvador, about 4,500 feet, 1; San Salvador, 3); San Miguel (Mt. Cacaguatique, 1). *Aimophila rufescens pectoralis*: Salvador: San Miguel (Volcan San Miguel, 9).

Dickey and van Rossem—Seven New Birds from Salvador. 7

Measurements.—

		Wing.	Tail.
<i>Aimophila rufescens rufescens</i> :	4 ♂♂	72.0–75.0 (73.4)	74.5–82.0 (77.9)
	7 ♀♀	67.0–71.0 (69.8)	70.5–77.5 (73.7)
<i>Aimophila rufescens pectoralis</i> :	4 ♂♂	77.5–79.5 (78.4)	84.0–87.0 (85.0)
	4 ♀♀	72.0–74.0 (73.4)	78.0–78.5 (78.4)

One specimen of *pectoralis* retains part of its juvenal plumage and was therefore not used in the table of measurements. It will be noted that while our measurements for *rufescens* are very close to those given by Mr. Ridgway (Birds of North and Middle America, pt. 1, 1901, p. 244) for the male series at his command, our measurements for seven females are decidedly smaller than those given by him for four females. We believe that our measurements more nearly reflect the differences between the sexes.

For their courteous cooperation in furnishing us with comparative series of specimens essential to the determination of the above material, and for other assistance, our sincere thanks are due to Mr. Ludlow Griscom of the American Museum, Dr. E. W. Nelson of the Bureau of Biological Survey, Mr. W. E. Clyde Todd of the Carnegie Museum, Mr. Outram Bangs of the Museum of Comparative Zoology, and Dr. Charles W. Richmond of the United States National Museum.